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ABSTRACT

This report summarizes programs and projects of the Frank Porter Graham Child Development Center, University of North Carolina at Chapel Hill. The report is organized in the following categories: (1) research; (2) demonstration and development; (3) outreach and training; (4) public policy analysis; and (5) support services and administration. Brief descriptions of specific programs within those categories are provided. Research programs include a longitudinal program consisting of several related projects to investigate the early development of basic abilities; programs of research on early education for the handicapped and learning disabled; health research projects; and family services research projects. Demonstration and development programs include early childhood education and curriculum development projects. Outreach and training programs are those concerned with the provision of technical and training assistance to child development programs. Public policy analysis is represented by a program to train graduate students and fellows in the application of social science knowledge to improve public policies that affect children and families. Support services and administration programs are the various administrative and management activities involved in the operation of the Center. (MJL)

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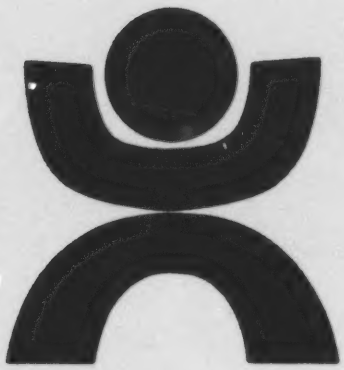
Status Report on Programs and Projects

as of January 1, 1982



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The Frank Porter Graham Child Development Center

Child Development Institute

The University of North Carolina at Chapel Hill

UD 022 226

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Introduction

In October 1981 the staff of the Frank Porter Graham Child Development Center (FPG) observed the Center's 15th birthday with a three-day series of seminars and special events. The occasion was observed as a rededication to the Center's purpose: to discover and apply knowledge for the benefit of children and families.

FPG's founders, Drs. Halbert Robinson and Ann DeHuff Peters, had three major goals:

-- to discover how to promote the optimal development of children;

-- to learn how to support parents by providing their children with comprehensive services including daycare, education, and health care;

-- and to document the difference such a program would make in the long-range development of the children and the stability of their families.

Dr. Robinson chose to name the Center after Dr. Frank Porter Graham, for whom he held a deep respect. Graham, who died in 1972, had served as president of the University of North Carolina, U.S. Senator, and delegate to the United Nations. He was widely respected as a lifelong advocate of human rights and equality of opportunity. His commitment to youth made it appropriate that a research center committed to youth carry his name.

FPG opened in 1966 as a pilot project in which a staff of four worked with 11 children who ranged in age from 2 months to 3 years. In 1968 FPG became one of two centers that make up the UNC Child Development Institute. The other center, the Biological Sciences Research Center, explores the genetic and biomedical influences on child development. The Institute was one of 12 established by Congress to conduct research and related programs focusing on mental retardation and child development.

Today the FPG Center conducts an early childhood program serving 60 children from 6 weeks to 5 years of age. In addition, more than a

thousand children have taken part in FPG research projects or been served through its other programs. Approximately 140 staff are now employed, including 23 University faculty members representing 10 schools and departments.

The Center's program encompasses four types of activities that represent a progression of knowledge about children from its discovery to its general application:

-- Research discovers facts by subjecting our concepts of children and families to investigation.

-- Development permits us to organize knowledge into a useful form, such as a curriculum product for teachers, a book for parents, or a manual for daycare directors.

-- Outreach and Training deliver knowledge to professionals on the job and help students prepare for careers in child development.

-- Policy Analysis applies what we know about children and families to help public decision makers weigh the merits of legislation and programs.

At the beginning of 1982, these four program areas comprise 23 FPG projects: 15 in research, 1 in demonstration, 2 in development, 4 in outreach and training, and 1 in policy analysis. Each program area draws upon knowledge and techniques contributed by scientists and professionals throughout the world. In turn, each program area disseminates the results of its work beyond the confines of the Center to the local community, the state, and wherever they may be used effectively.

About this Report

This volume was edited by Carol Klein and Joseph Sanders. Funds for its publication were provided by the National Institute of Child Health and Human Development and the State of North Carolina. Comments can be addressed to the editors at the Frank Porter Graham Child Development Center/ Highway 54 Bypass--West/ Chapel Hill, N.C. 27514.

The editors gratefully acknowledge the help of Brenda Brady in the preparation of the manuscript.

Research

The Longitudinal Program

Craig Ramey and James J. Gallagher, Co-Principal Investigators

Introduction

The Longitudinal Program, which was initiated in 1975, is enabling FPG to make a comprehensive study of child development during the first eight years of life. The program joins seven research projects in a coordinated investigation into the early development of basic abilities. The first project described here, the Abecedarian Project, was initiated in 1972 and was expanded into the Longitudinal Program in 1975. The projects cluster around unanswered questions about language, intellectual and social development, child health, and task-oriented behavior (the ability to concentrate on a problem and persist).

The seven projects have worked with the same group of 112 children selected before birth from low-income families. Children from backgrounds of poverty have been shown to face a high risk of developing more slowly than normal and entering school unprepared for classroom learning.

The program traces the development of basic abilities in these children from 6 weeks of age into their second year of elementary school. All the children joined the program at about 6 weeks of age, and now range from 4 to 10 years. The program attempts to identify which abilities are crucial to later success and to specify techniques and materials that can be used in homes, daycare centers, and schools to strengthen these abilities. Each project examines the same group of children from a different perspective. When all these perspectives are put together, a more complete picture will begin to emerge showing how to encourage the growth and development of children during the first years of life.

THE ABECEDARIAN PROJECT

Craig Ramey, Senior Investigator;
Frances Campbell and Dale Farran, Investigators

Initiated in 1972, the Abecedarian Project conducts research into the prevention of developmental retardation and school failure possibly attributable to economic or social deprivation. The project has included 112 high-risk children and their families. The 93 children currently in the project range in age from 4 to 10 years.

The Preschool Program

Children were randomly assigned at birth to an experimental or control group. The two groups differ in that the experimental children attend FPG's daycare program from infancy until they reach public school age. Control group children do not attend daycare at the Center nor is any attempt made to alter their preschool environments. Both groups have received supportive social work services upon request. The experimental children have free medical care at the Center; low cost or free medical care is available to control children at local clinics.

Children attend the Center five to eight hours each weekday for about 49 weeks a year. The child-teacher ratio varies from 3:1 for infants to 7:1 for 4 year olds. The children participate in a variety of activities aimed at supporting intellectual, social, and physical development. Major emphases are on experiences requiring language use and task orientation. After age 3, the children's curriculum emphasizes linguistic and social skills that are thought to be helpful for successful performance in public school.

The Elementary School Program

When children from both groups reach kindergarten age, half of each group is randomly assigned to school age experimental and control groups, creating the four groups of children shown in the accompanying table (93 of 112 children remain in the program--an attrition rate of only 1.58% annually).

The school age experimental group, their families, and classroom teachers receive the educational services from a home/school resource teacher. Each home/school resource teacher serves 10 to 12 children. School age control children do not receive services of a home/school resource teacher.

The resource teacher provides a liaison between the child's parents and classroom teachers to create specific educational activities for the home and classroom. Special emphasis is placed on home/school continuity

Table: Assignment to Groups

		Preschool Educational Intervention	
		Yes	No
School age Intervention	Yes	25	23
	No	20	25

of education in basic skills such as reading and mathematics. The resource teacher also serves as an advocate for the child to assure that full use is made of educational and community resources which might benefit the child.

The Research

The numbers within the squares in the table indicate the numbers of children who (by 1982) have been assigned to each of the four combinations of preschool/school age groups. This general design allows comparison of the relative effects of early versus later educational intervention.

In addition to the high-risk children, randomly drawn samples of children at the preschool and school age levels are assessed periodically. Studying these children and their families permits the investigators to compare the effects of educational intervention against a baseline of families from the local community.

To evaluate the intellectual, social, and educational consequences of this intervention program, a variety of procedures are used: standardized tests, controlled and seminaturalistic observations in laboratories, home and neighborhood observations, and interviews.

Preschool Intervention

Results from standardized mental tests indicate that experimental children maintained IQ scores within the average range from 12 to 60 months of age, but that over the same time period the mean IQ of the control children declined. Although there was an overall decline in the control group's IQ scores, the point of greatest difference between the groups was at 36 months of age when the average IQ for experimental group children was 100 and for control group children was 84. Thereafter, the control group's mean IQ showed a gradual rise, which is attributable in part to educational experiences obtained in the local community.

Early education intervention appeared to alter the relationship between socioeconomic conditions and child outcome. In the control group

maternal IQ, maternal attitudes, and the quality of the home environment were all significantly and independently related to child IQ at 60 months. For experimental children, however, the quality of the home environment was the only measure significantly related to child IQ at 60 months. The quality of the home environment was an important predictor of child outcome in both groups, indicating that early educational intervention can supplement, but not supplant, the home as a primary influence upon children's intellectual development. Early intervention does appear to help overcome some facets of psychosocial disadvantage during the preschool years.

A comparison of the experimental and control groups' scores on ability tests shows that experimental children at 42 and 54 months of age had significantly higher scores on verbal, perceptual-performance, and quantitative scale indices. At 42 months the experimental group also had significantly higher scores on memory, but the two groups did not differ on memory at 54 months. There were no differences between the two groups on the motor skills at either ages. Thus, the preschool intervention had positive effects on a range of cognitive abilities.

School readiness measured by the Peabody Individual Achievement Test (PIAT) indicates that, on entering kindergarten, experimental children scored significantly higher than did the control children. Thus, the experimental children appear to have been better prepared for entry into public school.

School Age Intervention

Teacher interviews were conducted at the end of the kindergarten, first grade, and second grade. The interviews focused on social behavior and academic characteristics. Although based upon relatively few children so far, the interviews suggest some tenative conclusions. Preschool experimental children initially got and maintained higher academic group placements. These group placements, however, bore almost no relation to IQ scores. Preschool experimental children were referred for a special education service less often than were the control children, and fewer of them were retained in the same academic group at the end of the year.

Mother-Child Interaction

A major section of the Abecedarian project has been concerned with mother-child interaction. Studies in this section have shown that there were no significant differences in the home environments of experimental and control children throughout the preschool years. However, data collected from studies of mother-child interactions indicated that preschool intervention may have had a positive effect upon the child-mother relationship. Comparisons of mother-child interactions between experimental and control groups when children were 36 months of age showed that experimental group mothers engaged in over three times as much mutual play with their children as did control mothers. The experimental mothers also initiated nearly four times as much mutual play with their children

as did control mothers. This can be interpreted to mean that intervention may have made the children more talkative, more responsive, and more initiating with adults than were the control children.

Recently Abecedarian researchers have been focusing attention on the mental development of children in the control group in order to understand environmental contributions to individual differences in their typical environment. Data have now been published which indicate that mothers' attitudes toward childrearing, the orderliness of the home, and child temperament--all assessed when their children were in early infancy--predict which children will become developmentally delayed by 24 months of age. These findings may help future educators to concentrate their efforts on that segment of the disadvantaged population most at risk for delayed development.

The Abecedarian Project also reported an indirect effect of early and continuing daycare on mothers of experimental group children. It has been found that by the time the experimental group children are 54 months of age their mothers have obtained significantly more formal education than have control group mothers and are more often employed in higher skilled occupations. Thus early education for high-risk children seems to have some positive effects on their families as well.

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PRESCHOOL LANGUAGE PERFORMANCE

Alice Gordon, Investigator

A key element in FPG's daycare program is the facilitation of language development in children judged to be at high risk for language failure. The Preschool Language Performance project tests these children to find out how they function in selected areas of language performance. In so doing, the project differs from most previous psycholinguistic projects which have not included high-risk children, have been limited to domains such as syntactic development, or have been conducted as isolated studies rather than interrelated, longitudinal studies.

The project also distinguishes itself from other intervention testing programs in that it goes beyond the use of the relatively global IQ test and utilizes, instead, the important components of language development in measuring performance differences that result from intervention. A variety of language skills are measured by administering a series of individual tasks in the areas of basic words, representative sentence structure, short stories and referential communication, and complex words and sentences.

For the past four years, the language tasks have been administered in 50-minute sessions to high-risk experimental daycare and control group children at 3.5, 4.5, and 5.5 years of age, and to a more advantaged, low-risk sample of children drawn from the local population. In addition, children in the three groups have been asked to answer open-ended questions. Their speech was taped, and evaluations are being made of each child's expressive language ability.

At all three age levels, the performance of the experimental daycare group exceeded that of the control group, but was not equal to the performance of the more advantaged group. It appears, then, that systematic daycare intervention has a facilitative effect upon the language performance of high-risk children. It is not surprising to note, however, that even though the experimental high-risk children showed improved performance, they still could not perform as well linguistically as children from homes with highly educated parents and with family incomes well above the national level.

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LANGUAGE AS AN ADAPTIVE TOOL FOR THE YOUNG CHILD

Lynne Feagans and Dale Farran, Investigators

This set of research studies has examined the abilities of different groups of children to handle connected discourse in school-like language tasks. Connected discourse is defined as language beyond the sentence level which forms a connected unit, as in story material or in a set of instructions. The ability of children to handle discourse was studied prior to school entry and during the first few years of school.

Study 1

In this study children from low-income families who were part of the Abecedarian project (both experimental and control) and children from middle-income families participated in two experiments in the fall and spring of their kindergarten year. Children in both groups were chosen from the same classrooms.

In Experiment I, the children were read three types of stories. The stories varied in the degree to which their events were sequentially and/or logically related to each other. The children were read each story until they were able to demonstrate perfect comprehension by acting out the story with props. They were then asked to paraphrase the story.

Although there was a difference between the groups in the number of times a story needed to be read before all information was acted out correctly, the major difference was in the amount of information communicated. The low-income children lost almost twice as much information in telling the stories back as the middle-income children. In addition, the low-income children produced five times as much irrelevant information compared to the middle-income children.

This experiment revealed only a slight overall advantage to the experimental group over the control group. The evidence suggests that a general intervention program may not have a large impact on the development of specific discourse skills.

In Experiment II, children were presented with two "magic" boxes. By following a sequence of three steps, the children were instructed to open the boxes in order to find a piece of candy. For one box, the children were given verbal instructions. For the other box they were instructed by a nonverbal demonstration. The instructions were repeated until the

children demonstrated comprehension by opening the box perfectly. The children were then asked to "teach" the trick to a blindfolded adult.

The analyses revealed that no matter what style was used to present instructions, children from a low-income background required one extra trial to learn the steps. When middle-income children communicated the instructions to someone else, they gave about twice the amount of information as low-income children, used fewer nonreferential pronouns, provided more words of instruction, and used a greater number of different kinds of words. Moreover, when middle-income children received instructions verbally, their performance was significantly better than when they were instructed by demonstration. The data indicate very few effects of the general intervention program on children's performance in the "magic" box experiment.

All middle-income and low-income children were tested again in the spring. Results indicated that although the low-income children did improve somewhat in both experiments, the middle-income children also improved. Thus the gap between the groups remained great even after one year in kindergarten.

Study 2

Since children in the low-income group were predominantly black, it was important to find a high-risk low-income group consisting of white children, so that the effect of both race and socioeconomic status could be explored. Separate funds from the Spencer Foundation were secured to study a group of white low-SES kindergarten-age children. Mothers of this group had less than a high school education at the time of the child's birth. In other demographic characteristics, however, such as income level and family stability, this group proved to be less at risk than had been initially assumed. The group proved to be composed of stable working-class families rather than families living in poverty.

The children in this working-class group were administered the experiments described in Study 1. Preliminary results showed that children performed slightly, but not significantly better on the stories task than did the experimental children. On the magic-box task, the white working-class children performed better than either the experimental or control children and they appeared to be more responsive to verbal stimulation. The performance of the working-class children improved more dramatically in the verbal presentation session, as compared to the improvement of both high-risk groups.

The results suggest that the working-class group might profit significantly from kindergarten. The children in this group appeared to incorporate the verbal stimulation to which they were exposed, and to improve their performance.

Study 3

Given the differences between the high-risk and middle-income children, it was felt important to assess the children's linguistic

flexibility in more depth. A new set of adaptive tasks was created in which several key components were varied, including the race of the examiner.

Thirty-one experimental and control children were tested on the Adaptive Language preschool battery. The race of the experimenter had no effect on the results. There was a surprising range of ability in these preschool children to tell a story under any condition, with some children simply unable to tell a story, even after practice, while other children needed no prompting and produced complicated stories. In addition it was easier, as expected, to tell a story about logically related rather than nonlogically related objects.

Summary

These studies marked the beginning of a concentrated examination of discourse processes in school-aged children. Under way are more studies of these same processes in second grade: studies examining the relationship between children's skills with connected discourse and their classroom behavior and achievement, and studies assessing teacher ratings of connected discourse skills.

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ANTECEDENTS AND CORRELATES OF ADAPTIVE BEHAVIOR

Earl S. Schaefer, Senior Investigator

The two major components of adaptive behavior are social adjustment and academic competence. This study looks at how children are rated by their teachers in the two areas, and compares the ratings with the attitudes and beliefs of the childrens' parents. The study also sees whether or not the ratings remain stable over a period of time and evaluates the effectiveness of interventions.

Instruments used to measure behaviors are the Classroom Behavior Inventory, the Bipolar Trait ratings, and the Social Assets Inventory. These instruments measure intelligence, extroversion versus introversion, and considerateness versus hostility. Such characteristics as curiosity, creativity, independence, and task orientation occur as combinations of the above three dimensions. Children in daycare and the first three years of school are rated twice each year by their teachers. Mothers are

interviewed when their children enter kindergarten and again when their children complete second grade. Because the focus is on positive rather than deviant behavior, it is possible to set definite goals for intervention and service programs.

A preliminary analysis of the children from 3 years of age through second grade has been made to determine the stability of their behavior. There was a substantial consistency of behavior during the preschool within the daycare center. An abrupt change then occurred during the transition from preschool to kindergarten. However, there was evidence that behavior stabilized during the second grade and became more consistent with the preschool behavior. These findings are similar to other findings that show differing behavior at home and at school.

High-risk kindergarten children from FPG's daycare program were found to be more intelligent and creative than were high-risk children in the control group. However, the daycare children were also found to be less considerate and more hostile than the control children. Differences between the groups were less evident among a smaller number of children who had completed grades one and two.

The "Parent as Educator Interview" revealed that modern attitudes toward child rearing and education correlate with observations of parent behavior. Recent analyses have revealed that parent behaviors, along with parents' attitudes, beliefs and values, were more significant as predictors of childrens' academic competence than maternal demographic and psychological characteristics.

Mothers of the experimental daycare children apparently have benefited from their participation in the project. They are less inclined to believe that all children, if allowed, will misbehave. They believe they have control over their own lives. On all scales, experimental mothers had attitudes that are positively related to their child's academic competence. The findings suggest that the teaching of parent behaviors might be supplemented by teaching modern parent attitudes, beliefs, and values in order to increase the long-term effectiveness of parent-centered intervention.

The measuring scales used in this project have been found by other investigators to show promise as screening tools for mental retardation, learning difficulties, and emotional problems in young children.

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HOME, NEIGHBORHOOD, AND CLASSROOM OBSERVATIONS

Ron Haskins and Neal Finkelstein, Investigators

This group of studies is designed to learn how a child's social circumstances influence development and school achievement. Each study focuses on some aspect of children's social experience, and attempts to relate social experience with school academic performance or classroom behavior.

Over the past four years, investigators followed Abecedarian children into public school kindergarten and through the first three years of school (see page 4). A total of nearly 60 FPG children have been observed in their neighborhoods, their kindergarten classrooms, and during recess. In addition, 30 of these FPG children have been observed in the classroom and during recess for three years, and another 20 children were studied for two years. The neighborhood and classroom data have also been collected on a sample of middle-class children matched with the FPG children on sex and classroom.

Information is also being collected on all kindergarten children--both the FPG sample and the middle-class sample--through family interviews. Thus far, interview data seem to indicate that low-income black children have extensive contact (at least once a month) with more than 30 different relatives (such as aunts, uncles, grandparents, and cousins). By contrast, middle-class children have very little regular contact with relatives outside their immediate family. In addition, poor children know more adults well who have been unemployed, have lower status occupations, and had children while unmarried than do children from middle-class families. Low-income parents also use physical punishment more frequently than do middle-income parents, although virtually all parents said they used at least some physical punishment.

An article has been published on the instructional experience and behavior of children while they were in skill groups in the public school classroom. Preliminary information had indicated that about 80 percent of kindergarten and first grade teachers in Chapel Hill used ability grouping in math or reading. A number of studies in the literature have reported anecdotal evidence that children in low-skill groups receive less, and perhaps inferior, academic instruction than do students in high-skill groups. The investigators regarded this possibility as at least a partial explanation of the widely reported differences in academic achievement

between low-skill and high-skill children. Further, because casual observation suggested that low groups were populated disproportionately by children from low-income and black families, any differences in academic instruction during skill groups could also help account for the generally lower achievement test scores frequently reported for such children.

Children were observed during language arts instruction in the lowest and highest skill groups in 19 kindergarten and first grade classrooms. In each group the investigators watched 10 randomly selected children for eight minutes each on three days of instruction.

Four results bear emphasis. First, although teachers placed both high- and low-skill students in groups of about the same size (5.9 and 4.7 respectively), they organized the groups in significantly different ways. Specifically, they tended to have high-skill students in individually-assigned seats pursuing their tasks independently. By contrast, they worked with low-skill students together in groups of five or six around a table with relatively high levels of teacher supervision.

Second, teachers used instructional time differently. High-group children spent about 20 percent of their time practicing previously learned skills as compared with more than 32 percent by children from low groups. Further, teachers spent about 50 percent more time introducing new subject matter to high-group than low-group children.

Third, there were a number of differences in teachers' use of control techniques with the two groups. With low-group students, teachers used about twice as many statements to control behavior not directly related to academic instruction (e.g., "sit down"). They also used twice as much positive reinforcement and about six times as many disciplinary statements with low-group students.

Fourth, children in the two groups behaved quite differently. Children in the low groups were about eight times as likely to interfere with their peers' academic work by taking materials or otherwise disrupting them, and were about twice as likely to be doing something other than their assigned task.

Taken together, these results do not confirm the suspicions of some investigators that low-group students receive less academic instruction. However, they do receive less exposure to new material and do less independent work. The instruction of low-group students takes place in a situation characterized by much more discipline, more control attempts by teachers, and more punitive statements by teachers. Nonetheless, given that low-group students are frequently off-task and quite disruptive, teachers' behavior toward them seems appropriate.

OBSERVATIONAL STUDIES OF ADAPTIVE CLASSROOM BEHAVIOR

James D. McKinney and Lynn Feagans, Investigators

The objectives of this study are to assess the effects of Preschool and school-age intervention on the adaptive classroom behaviors of high-risk children, and to determine the relationship of classroom behavior to academic progress.

Adaptive classroom behavior refers to task-oriented, social, and affective behaviors during instruction which have been related to achievement in previous studies. Investigators measure classroom behavior patterns with an observation system called SCAN. Children in the Abecedarian Project are observed during two days of classroom instruction each year through the second grade.

Teacher activity and key features of the learning environment are also recorded in order that behavior can be studied in relation to classroom processes and the academic demands that are made of the child.

Preliminary analyses have compared the high-risk experimental children to high-risk control children and each group to a general population sample. The FPG experimental group did not differ from the FPG control group with respect to most SCAN behavior patterns. However, FPG experimental children were more aggressive than children from the general population in the same classroom, and tended to be have more off-task behavior. The FPG control group's response to kindergarten placement was markedly similar to that of the classroom general population sample.

The importance of adaptive classroom behavior for school success was demonstrated in one analysis in which SCAN behaviors were combined with IQ at kindergarten entry to predict achievement gains during the school year. These results showed that behavior patterns and IQ both were required to predict the progress of high-risk children, whereas only IQ predicted the progress of general population children.

Exploratory analyses yielded moderate relationships between off-task behavior, attentiveness, gross motor activity, aggression, and low academic achievement at 60 months. Also, maternal IQ and education were related to several SCAN behaviors such as off-task behavior, attentiveness, aggression, and dependency. This data set is being further analyzed, and additional data is being collected at kindergarten, first, and second grade levels.

The analysis of data on classroom setting has been primarily descriptive. However, as expected, children were observed in more academically demanding settings as they advanced through the grades.

Preliminary evidence suggests that FPG experimental group children responded to the increased emphasis on basic skills in more task-oriented fashion than did control group children.

Future work planned in this set of studies involves the observation of teacher-child interactions during classroom instruction. In these studies we hope to better understand the classroom processes which account for the relationships we have found between child behavior and academic progress.

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RESPIRATORY ILLNESS AND BEHAVIOR

Albert Collier, Senior Investigator;
Margaret Sanyal and Ron Haskins, Investigators

Some researchers have suggested that hearing loss during the early developmental years may lead to language deficits. Yet in the past there has been no methodology to conduct repeated measurements of infant hearing. Now infants as young as 8 months can be tested using a procedure called Visual Reinforcement Audiometry (VRA), in which an auditory stimulus is presented to the child through a monaural headphone. The child is conditioned to look toward his left when he hears the stimulus, in anticipation of seeing a lighted animated toy. The loudness of the stimulus is decreased until the child does not respond. In this way a hearing threshold may be obtained.

The VRA procedure was used during the past year in a study of hearing loss experienced by infants with otitis media, a common middle ear infection. Twenty-three infants from 8 to 19 months of age were tested. Eleven of the infants had 17 episodes of otitis media in the nine-month period of observation, with a range of one to three episodes per child. Forty-nine percent of the cases were unilateral (involving only one ear). The children showed a hearing loss in 13 of the 17 episodes.

Children already enrolled in the study will be followed for the next year, and new children will be added. Data analysis of acute and long-term effects of hearing loss will lead to an understanding of the potential links between middle ear disease and subsequent verbal intellectual ability.

The hearing loss study is part of a series of investigations concerned with acute illness and child behavior. Previous research has examined the effect of respiratory illness on infant learning in the first year of life, and on infant and caretaker social behavior.

A recently completed study has examined how data obtained on respiratory illness and infection relates to the clinical problem of otitis media. The study, conducted over a period of years, differs from prior studies which have suggested that there may be little or no connection between middle ear disease and other infections.

The study concluded that respiratory infection is a major cause of otitis media, and that certain respiratory viral infections are more frequently complicated by the middle ear disease. Overall, otitis media was diagnosed in 21.3% of the studies, a rate 3.2 times that of cases where viral infections were not identified. It was also found that the presence of certain bacteria in the nasal region increases the likelihood of developing otitis media. Elimination of those cases of otitis media which are attributable to the colonization of bacteria would result in approximately a 25 percent reduction in total otitis media episodes.

The findings suggest that more attention to the role of viral infection as an initiating factor in otitis media is indicated.

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Research

The Carolina Institute for Research on Early Education for the Handicapped (CIREEH)

James J. Gallagher, Director

Introduction

The Carolina Institute for Research on Early Education for the Handicapped (CIREEH) investigates the development of young handicapped children and the role of the family in their development. Begun in 1977, CIREEH is one of four institutes in the U.S. funded through June 1982 by the Special Education Program in the U.S. Department of Education. CIREEH is located at the FPG Center and draws upon the staff and resources of two other UNC units: the Division for Disorders of Development and Learning and the School of Education.

Six of the projects described in this section are ongoing longitudinal studies designed to report their final results after they are completed in 1982. The seventh project, "Successful Parenting of Handicapped Children," was completed in 1980.

A more detailed report on CIREEH projects will be published in 1982 under the title, CIREEH Status Report. "CIREEH Abstracts," summaries of publications generated by CIREEH projects, are updated periodically. Both the report and abstracts are available upon request from the FPG Communications Office at the address given on page 2 of this report.

PROJECT CARE

Craig Ramey, Joseph Sparling, and Barbara Wasik, Investigators

The Carolina Approach to Responsive Education (Project CARE), begun in 1978, compares various features of intervention programs for high-risk children. Sixty-three high-risk families with newborn infants were randomly assigned to three experimental groups; parent education alone, parent education and FPG daycare program, and a control group. Eighteen more advantaged families were included in the daycare and control groups.

Daycare families and families in the parent-education-alone group were visited about once every 10 days by a teacher who provided parents with childrearing information.

Preliminary results of the project show that disadvantaged infants receiving both daycare and parent education do as well on intellectual development tests as their more advantaged peers, and they perform better than do the disadvantaged children who received either parent education alone or no form of intervention. Mothers who receive parent education seem to be more involved with their children and spend more time playing with them than do mothers who receive no parent education.

When asked to identify their problems, mothers listed income, housing, and transportation as their major concerns. Only 8 percent of the reported problems dealt with childrearing. To help mothers solve their more general problems, home visitors are teaching them problem-solving skills through a specially designed curriculum.

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FAMILIES AT RISK:
STUDIES OF MOTHERS OF AUTISTIC CHILDREN

Marie Bristol, Investigator

This research is concerned with coping and stress in mothers of autistic children. An initial cross sectional study found maternal stress can be predicted from such variables in the child as difficult personality characteristics and degree of dependency. Stress in the mother also can be created by lack of appropriate activities and services, limited opportunities for independent living for the child, and other negative factors in the environment.

Mothers reporting the lowest stress were found to have more adequate support from their husbands and other family members. They were less isolated from friends and other parents of handicapped children. In

addition, their children were more likely to be girls than boys, and to be less severely handicapped physically and emotionally. Level of stress regarding the child was not related to social class, race, mother's age, or birth order of the child. Older children, both boys and girls, were more stressful than younger children.

A longitudinal study of 45 mothers is currently under way. It is assessing the extent to which the impact of autistic children on mothers may be alleviated by such resources as family supports and coping strategies, as well as by the mother's beliefs about the child. Another study in collaboration with James Gallagher is comparing family task allocation in single-parent and two-parent families of handicapped children.

It is anticipated that coping strategies and supports used by more "successful" mothers might have implications for interventions with mothers who are not doing as well.

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SUCCESSFUL PARENTING OF HANDICAPPED CHILDREN

James J. Gallagher, Investigator

The Successful Parenting of Handicapped Children project was conducted to discover why some families with a handicapped child adapt to their situation and function more successfully than do others. Such information might be useful in helping more such parents adapt.

Now completed, the study included 50 pairs of middle-class parents, each with a child under five years of age who had a moderate to severe handicap and who was enrolled in a special preschool funded by the Handicapped Children's Early Education Program (HCEEP). Twenty-nine sets of parents were identified by HCEEP staff as "successful" and 21 "average" in their ability to cope and function in the community. The two groups were compared on measures of stress, support, and family role performance.

No differences were found between the two groups in the levels of stress they experienced or the availability of support services. Both

groups agreed that the father should help more with activities that involve the handicapped child, but few knew how to create more involvement.

Successful parents appeared better able to put their child's handicap into perspective, refusing to permit it to control family decisions and activities. Successful mothers had more self-confidence and were better able to control their environment than were average mothers.

The project produced a Parent Role Scale that was subsequently revised for use with either single-or two-parent families. It is being used by Dr. Marie Bristol in her "Families at Risk" project.

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PARENT INVOLVEMENT PROJECT

Ronald Wiegerink, Investigator

This project has completed two years of survey studies of parent involvement in programs for preschool handicapped children. The final survey examined parent participation in 48 programs across the nation: 24 in public schools, and 24 in private agencies. Both program staff members and parents were surveyed to determine what parent activities were provided by the programs and which were being used by the parents. The Parent Involvement Survey instrument was used to collect the data. This instrument, adopted from an earlier survey, lists 34 parent activities which were considered by a panel of experts to be important to involve parents meaningfully in the program. The activities include those of parent training, active parent participation in classroom and project activities, parent participation in information activities, and participation in project development and organization.

Staff were asked to indicate the percentage of parents involved in each of the activities and to identify barriers to additional involvement. A sample of parents drawn from each of the projects was independently asked to identify their participation in the project and to identify barriers to their further interest and participation needs not met by the program. Early studies had indicated considerable variation among projects on amount of involvement of parents both in types of activities used and numbers of parents participating. Both project size and agency

sponsorship were correlated with amount of participation: larger projects and public agencies had less participation than others. The more recent study should shed additional light on these findings. Data are currently being analyzed.

The Parent Involvement Project staff hope to identify: 1) prevalent methods for involving parents, 2) activities which produce high levels of parent participation, 3) parent attitudes toward their involvement, 4) child and parent characteristics related to levels and type of involvement, and 5) barriers which stand in the way of additional participation as identified by staff and parents.

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PARENTAL PERSPECTIVES OF PRESCHOOL MAINSTREAMING

Ann Turnbull, Investigator

This project is intended to clarify the theory and practice of mainstreaming by examining existing preschool programs and reviewing research literature. A two-phased interview study with parents of handicapped preschoolers and a comprehensive survey with parents of handicapped and non-handicapped children in mainstreamed kindergartens have been completed. They yielded information about parents' perspectives of preschool mainstreaming and their participation in program activities.

The results of the survey indicate that parents see both benefits and drawbacks to mainstreaming. Parents in both the handicapped and non-handicapped groups feel that regular teachers are not qualified to instruct handicapped children. Parents of handicapped children feel that mainstreaming helps prepare their children for the real world. Parents of non-handicapped children believe mainstreaming helps their children learn about the differences in the way people grow and develop.

The survey revealed that 85% of the parents of handicapped and non-handicapped children would like more information about mainstreaming, with the largest number of parents (73%) preferring print materials as compared to television (17%), or the PTA (8%).

The Parent Handbook

As an outgrowth of the research with parents, a handbook is being developed which will assist parents in making preschool placement decisions. The handbook will be field-tested extensively for content, impact, effectiveness, clarity, newness, practicality, and social fairness. Revisions will be made from the comments of parents and professionals.

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THE CHILD ASSESSMENT PROJECT

Rune J. Simeonsson, Investigator

The Child Assessment Project has explored ways in which to improve the assessment of behavior and development in handicapped infants and young children. Measures of behavior and temperament have been obtained for several hundred handicapped children served in programs across the nation. Analyses of behavior and temperamental characteristics have indicated their utility in documenting the developmental status and progress of handicapped children. Furthermore, these measures produced information which extended and complemented more traditional indices of development. Information derived from these expanded assessment approaches may have potential in prescribing interventions for children and documenting the effectiveness of such interventions.

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CURRICULUM DEVELOPMENT PROJECT FOR MODERATELY/ SEVERELY/ MUTIPLY HANDICAPPED INFANTS

Ken Jens and Nancy Johnson, Investigators

A curriculum with two closely linked units, and providing well-defined sequential tasks, is being developed for handicapped children from birth to two years of age.

The first unit will include intervention items for children up to the age of one. The second unit will provide items for children from one to two. Important in the development of the curricula is the recognition of every child's right to develop to his or her fullest capacity, while acknowledging that many of the children will never achieve "normalcy."

The Carolina Curriculum for Handicapped Infants--the Year One curriculum--has been field tested in developmental centers throughout the United States. The Carolina Curriculum for Handicapped Toddlers--the year two curriculum--is currently being field tested. Together they include 29 sequences organized within five developmental domains.

The Curriculum has been distributed to potential publishers through the Market Linkage Project sponsored by the Special Education Program in the U.S. Department of Education. A contract for its publication is currently being negotiated. It should be available commercially in 1982.

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Research

Individual Research Projects

HEALTH RESEARCH

Albert Collier, Senior Investigator;
Fred Henderson & Margaret Sanyal, Investigators

Medical data on FPG children has been compiled since 1966, the year the Center opened. The program has been funded by several federal agencies including the National Institute of Child Health and Human Development, the National Heart, Lung and Blood Institute, and the Environmental Protection Agency.

A recently completed study has examined the clinical problem of otitis media (middle ear infection) using data obtained on respiratory illness among children at FPG. The study, conducted over a period of 14 years, differs from prior studies by indicating that viral infections have a more significant role in middle-ear disease than had been previously documented. The study concluded that viral respiratory infection is a major precipitating factor for otitis media, and that certain respiratory viral infections are more frequently than others complicated by the middle-ear disease. Overall, otitis media was diagnosed in 21.3% of children with viral illnesses.

It was also found that the presence of certain bacteria in the nasal region increases the likelihood of developing otitis media. The presence of these bacteria had less of an effect on the occurrence of a viral respiratory infection. Elimination of those cases of otitis media which were attributable to the colonization of bacteria would have resulted in approximately a 25% reduction in total otitis media episodes. The findings suggest that more attention should be given to the role of viral infection as an initiating factor in otitis media.

Reference

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A STUDY OF HOW THREE LEVELS OF SERVICES AFFECT FAMILY FUNCTIONING

Joseph Sparling and Craig Ramey, Senior Investigators

This project investigates the effects of services on the ability of the high-risk families in Project CARE (see page 18) to cope with problems of childrearing. The results will help service providers to match more accurately the appropriate level of treatment to the client family.

The two formal services included in the research are daycare and home visitation. Three tentative conclusions from the implementation data on home visits are:

-- The infant was awake and actively participating in about two-thirds of the visits. During the week previous to these participatory visits the performance of the infants was rated as positive, while the previous weeks' performance of the infants who did not participate in the visit was not as positive, according to reports by their mothers.

-- Visits varied in length from 15 minutes to over an hour. The longer the visit, the more positively did the visitor rate the mother's response during the visit.

-- An equal number of visits was completed for both working and non-working mothers; yet non-working mothers more frequently failed to be at home for the scheduled visit, requiring additional scheduling by the visitor.

Another aspect of this study focused on family supports such as those provided by community agencies. The 70 mothers in the program were interviewed and the following tentative conclusions reached:

Mothers knew an average of 36 agencies out of a total of 135 agencies in the local community. They knew enough to describe the types of services the agencies provide, and whom they serve.

The degree of agency awareness is illustrated by the fact that only one-third of the high-risk mothers knew about the Interfaith Council for Social Services, an agency which provides emergency short-term loans and other crisis support. Eleven mothers had used the agency in the past year. A well-known, often-used agency was the WIC Program, which provides no-cost infant formula. Sixty-two of the 70 mothers interviewed knew about WIC and 44 of them used the agency in the past year. On a satisfaction scale ranging from -3 to +3, the average rating was +2.1. The variations in use of and satisfaction with available community resources will provide input of special importance to the final analysis of outcomes.

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LONGITUDINAL STUDIES OF LEARNING-DISABLED CHILDREN

Donald McKinney and Lynn Feagans, Co-Principal Investigators

A longitudinal study of the developmental patterns of learning disabled children has recently been completed with a grant from the Special Education Program (SEP) in the U.S. Department of Education. The program began in 1978 with 63 learning disabled and 66 non-learning disabled children who were six or seven years of age.

A comprehensive battery of tests and observations was collected on all children at the time of their acceptance into special education programs, and throughout their participation in the program. The data compared the strengths and weaknesses of the two groups in the areas of language, problem-solving, intellectual ability, and personal/social competence. Also, extensive information was gathered on families through home interviews.

Preliminary results of the first year language assessment showed few differences between the groups in the use of syntax, but by the third year major differences were noted. Although the LD and non LD children did not differ in their understanding of narratives, or in the amount of irrelevant information introduced into stories, the LD children produced a greater number of sequencing errors than did non LD children, and showed an increased difficulty in rephrasing their communications.

In perceptual development, LD children showed poorer performances at younger age levels, and a slower rate of development, than did their non LD peers. Problem-solving in eight- or nine-year-olds has not reached a very sophisticated level; therefore conclusions about this aptitude cannot be drawn with certainty.

Conceptual growth--according to the Concept Assessment Kit (which measures conservation of number, substance, weight, and so forth)--was delayed in LD children, compared to average achievers. Some LD children, however, performed as well as their normal peers.

During instructional activities in the classroom, the LD children, compared to non LD children, displayed more off-task behavior. The LD children also interacted more frequently with teachers, and were more

dependent in their social interactions. Teachers consistently rated LD children as more distractible and apathetic, and less task-oriented, independent, and creative.

Family studies revealed that LD children tend to be later born, and to have more brothers and sisters than do non LD children. LD families reported significantly greater involvement in activities related to special education planning and evaluation, but LD and non LD families did not differ with respect to their beliefs about the goals of education, how children learn, or their role in their childrens' schooling. Differences emerged, however, in the parents' perceptions of their children. Non LD parents wanted their children to be obedient; LD parents wanted them to listen well. LD parents also saw their children as having poorer memories, learning less quickly, being more clumsy and forgetful, more prone to injuring themsleves and losing things, and more detached in their personal relationships at home.

In addition to revealing major differences among LD and non LD children, this research showed the importance of understanding variables within heterogeneous groups of LD children, so that more reliable individualized instruction could be prescribed.

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Demonstration and Development

EARLY CHILDHOOD EDUCATION PROGRAM

Sally Nussbaumer, Director

FPG's Early Childhood Education Program, which provides demonstration daycare, exists to support the Center's research and development efforts. Since the Center was founded in 1966, it has operated a daycare program continuously to make it easier for children and their parents to take part in studies. The quality and stability of the daycare program contributes to the low attrition rates enjoyed by FPG's multi-year research projects.

Approximately 60 children, ranging in age from 6 weeks to 5 years, are enrolled. The program operates each weekday on the second floor of the FPG research building from 7:30 a.m. to 5:15 p.m. Currently there are three divisions of children in the program: an infant nursery for children under a year of age, a toddler group of 1-and 2-year-olds, and a preschool group. Also in the research building, the Chapel Hill-Carrboro School System operates a kindergarten/first grade program for 52 children.

The overall goal of the daycare program is to prepare children for later school success. Several other goals are related to this main goal. They are:

-- to promote each child's social, emotional, physical, and intellectual development;

-- to involve parents in the development of their children and in the daycare program;

-- to discover effective ways to teach young children;

-- to document through research the effects of the daycare program;

-- to demonstrate daycare and parenting techniques so that others may put them to use.

To meet these goals, the program provides a mixture of individual, small-group, and free play activities. There is a strong emphasis on developing the children's language skills and task orientation (the ability to concentrate on a task and tune out distractions). There are 15 teachers and aides for the 60 children; the staff-child ratio meets federal certification standards for each age group within the program.

To involve parents in their children's education, the program has added more parent-centered activities over the past several years. Parents may use the center's toy-lending library and attend monthly parents' nights. Some parents whose children are enrolled in Project CARE (see page 18) are visited at home every 10 days.

1982 Plans

In September 1982 the program will begin using the LIFT (Learning through Intentional Families and Tutors) model of daycare. Children past the nursery age will spend their days in multi-age groups of five with one teacher. Outside tutors will work daily with one or two children at a time; they will provide intensive learning, take short field-trips, or observe the children in free play. Parents may volunteer to tutor.

The change is being undertaken to provide more individual attention for the children, to provide multi-age grouping, to put more variety in the daycare program, and to encourage more parent involvement.

INFANT CURRICULUM

Joseph Sparling, Senior Investigator

One hundred learning games for children under 3 years of age have been published in three formats. The games were designed so that a parent, daycare teacher, or other adult can use play to encourage a child's mental, motor, language, and social development.

Learningames for the First Three Years, by Joseph Sparling and Isabelle Lewis, was first published in hardback in 1979. A paperback edition released in 1981 is sold in bookstores and other retail outlets.

Now an expanded Learningames kit, subtitled A Program for Parent/-Center Partnership, is available to daycare centers and preschools. Each of the 100 games is pictured on a 6" by 9" card that also tells the teacher how and why to use it. Parents help teachers choose games by identifying areas of the child's development, such as self-image or creativity, that are important to them. Wall charts show how the games fit into stages of development while record sheets keep track of each child's progress through the games' sequence. Other sections include take-home materials for parents and a seven-chapter user's guide.

A new curriculum development effort started in 1980 will produce a product tentatively titled Careteacher Skills. This handbook is being designed to highlight the skills employed by adults as they engage in learning games with young children. The adult skills include planning,

talking, supporting, showing, clarifying, and expanding. Practice sheets, self-observation guides, and review forms will be included in the handbook.

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THE EARLY CHILDHOOD CURRICULUM DEVELOPMENT PROGRAM

Thelma Harms, Senior Investigator

Since 1976, the Early Childhood Curriculum Development Program has focused on planning, developing, and evaluating educational materials for children and adults. The activities have included teacher training in language/communication skills in preschool and primary school groups, and nutrition education for child care centers. Members of the development staff worked closely with the daycare and public school classes at the Frank Porter Graham Center, as well as several other programs in North Carolina and other states.

Most recently, the program has focused on the use of a scale to measure the child's school and daycare environments, and has produced basic information packets for homebased caregivers.

Assessment of Early Childhood Environments

After three years of field-testing in North Carolina, Iowa, and Missouri, the Early Childhood Environment Rating Scale (ECERS) was published by Teachers College Press in the fall of 1980. The instrument is used by teachers and daycare staff to measure how well their facilities, furnishings, equipment, and programs are promoting the development of the child. In 1981, the ECERS was modified for three different applications.

First, the scale was used to compare preschool daycare environments provided for handicapped and nonhandicapped preschool children. A comparison study was conducted in 25 classrooms for preschool handicapped children and 56 classrooms for preschool nonhandicapped children. It found that ten environmental aspects differed significantly in favor of the nonhandicapped. These were: furnishings for relaxation and comfort,

room arrangement, child-related display, space for gross motor activities, scheduled time for gross motor activities, art, blocks, sand/water, dramatic play, and cultural awareness. Differences were most pronounced on those dimensions associated with room arrangement for interest centers, provisions for relaxation and comfort, creative activities, and social development.

Aspects in which handicapped and nonhandicapped programs did not differ significantly were: the quality of personal care routines, language-reasoning experiences, most of the fine and gross motor activities, and meeting the needs of parents and children.

Adaptations and additions to the ECERS are currently being made to produce a special education version of the scale.

Second, a new version of the scale was developed for homebased daycare programs. The Daycare Home Environment Rating Scale (DCHERS) is currently being field-tested.

Third, the ECERS proved to be an appropriate tool for the inservice training of kindergarten teachers and teacher aides. In this program involving ten classrooms, teaching staffs and the school principal used the scale to conduct self-assessments preceding and following a year of training.

The Homebased Day Care Training Program

Twelve information packets have been produced for use by people who provide daycare in their own homes for children of other families. The packets provide entry-level training on a variety of topics related to child care. They are self-instructional and easy to read. In addition to information leaflets, they contain printed material to circulate to parents. Activities outlined in the packet material are easily adaptable to the individual home setting.

The packets were developed under a contract with the Daycare Section of the North Carolina Department of Human Resources, using federal Title XX training funds.

They were field-tested with approximately 100 homebased daycare providers in eight North Carolina counties, in both rural and urban settings. Dissemination of the materials in North Carolina started in 1982. Under a continuation of this program, inexpensive media materials are being produced for use with the packets. A correspondence course incorporating the packets is also being developed.

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Outreach and Training

TECHNICAL ASSISTANCE DEVELOPMENT SYSTEM (TADS)

Pascal Trohanis, Principal Investigator and Director

The education of many young handicapped children is stimulated and developed by two groups in the Eastern states: locally based demonstration projects and state education agencies. These groups, which receive grants from the U.S. Department of Education's Handicapped Children's Early Education Program (HCEEP), receive a wide range of support services as clients of the Technical Assistance Development System (TADS).

TADS was established in 1971, and is currently operating under a two-year contract with the Department's Special Education Program. During 1980-81, TADS helped 53 demonstration projects and 13 education agencies in such areas as staff development, program evaluation, demonstration and dissemination, interagency coordination, and program administration. Following assessments of each client's needs, the technical assistance took the form of consultations, project visitations, information services, conferences, print materials, and small workshops.

The year was marked by several activities of special significance. These included: 1) the planning of orientation and topical conferences with the Special Education Program and WESTAR (the TA agency serving Western HCEEP clients), and 2) the implementation of a comprehensive evaluation plan for documenting the effectiveness of technical assistance. TADS also provided specialized assistance for minority leadership and rural, urban, and infant projects of HCEEP.

1980-81 Media Products

Part of TADS' mission is to provide information to its clients. In 1980-81 four books were published: The HCEEP Overview and Directory, Ideas on Change, Interagency Casebook, and Infant Curriculum. Other media efforts included a quarterly newsletter, Emphasis, a proceedings document from a "Health Care/Education Relationship" conference, and two studies--a case study of TADS' technical assistance and an evaluation of needs assessment. Also disseminated during the year were papers on "Special Education Mandated from Birth," "Planning for a Culturally Sensitive Program," "Gathering Information for Parents," and "An Early Childhood Special Education Primer." Finally, a 20-minute videocassette was produced to introduce clients to the process of institutionalizing program changes on behalf of young, exceptional children.

1981-82 Plans

A comprehensive evaluation study covering three years of TA services will be completed. Three resource books will be prepared in September 1982. Four occasional papers, as well as the four issues of Emphasis, will be produced. A national workshop on "Mainstreaming Young Handicapped Children" has already been held.

References

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Ramey, C. T., & Trohanis, P. L. (Eds.). Finding and educating high-risk and handicapped infants. Baltimore: University Park Press, in press.

Trohanis, P. Technical assistance: An innovative approach to building new partnerships in continuing and inservice education. Educational Technology, 20(8), 1980, 30-36.

Trohanis, P., Woodard, M., & Behr, S. Services for young exceptional children. The Exceptional Parent, 11(1), 1981, S13-S20.

BASIC SKILLS NATIONAL TECHNICAL ASSISTANCE CONSORTIUM

Pascal Trohanis, Principal Investigator

As a member of the Basic Skills National Technical Assistance Consortium, the Frank Porter Graham Center assists demonstration grants and provides consulting services to eight state education agencies in order to improve basic skills programs in reading, mathematics, and oral and written communication.

Background

The Consortium was formed to help national demonstration projects in private and public schools, institutions of higher learning, and non-profit organizations. The projects are developing model techniques that other schools can use to improve their own basic skill programs. For example:

-- For elementary school children in Florida, parents serve a demonstration project as home tutors, room parents, and teacher aides.

-- A project in Georgia brings together a university and a large urban school district to improve the oral communication of junior high school and high school students through collaborative inservice training for teachers.

-- A Tennessee project is training volunteers to work together with illiterate adults.

There are 25 model demonstration projects in the Southeastern United States. The projects were financed by grants under the Basic Skills Improvement Program established by the Education Amendments of 1978. The Department of Education offered grants to state departments of education to provide leadership in basic skills improvement efforts; it also offered contracts for technical assistance, distribution of inexpensive books, and improvements in mathematics teaching.

Practices and processes developed by grant projects will be made available to potential users nationwide through existing dissemination channels. To promote communication among federal, state, and local participants, the Consortium produces two publications--a quarterly newsletter and a handbook outlining techniques in operating a model demonstration program. A yearly meeting of state basic skills coordinators, a state column in the newsletter, and a seven-member steering committee help the coordinators share information about activities in their respective states.

Work of the Consortium is carried out by five regional technical assistance centers and a national coordinating staff of CEMREL, an educational laboratory in St. Louis, Missouri. The centers hold seminars, provide on-site assistance and information on locating instructional materials, help locate appropriate consultants, and promote networking among basic skills grants projects.

1980-81 Highlights

The Center, as a member of the Consortium, convened regional workshops in Chapel Hill, Jacksonville, and Nashville, produced three issues of Basic Skills Notes (a periodic regional publication), wrote two sections of the Handbook on Model Development, and provided individual technical assistance to all clients in the southeast.

1982 Plans

FPG will plan and convene two regional workshops, continue individual technical assistance to demonstration projects, document what has been learned from the projects and from providing technical assistance, and plan and convene two meetings for state education agency personnel. The Consortium will complete its work in September 1982.

DISSEMINATION TECHNICAL ASSISTANCE PROJECT

Pascal Trohanis, Subcontract Manager

Providing schools with personnel training and practices that will improve programs for handicapped students is the purpose of the Dissemination Technical Assistance Project sponsored by the Special Education Program (SEP) of the U.S. Department of Education. Started in October 1981, the project contributes to ambitious goals addressed by the Comprehensive System of Personnel Development, an element of the "Education for All Handicapped Children" Act (P.L. 94-142).

Two states, North Carolina and Connecticut, were selected by the Project to receive assistance in personnel training because of their diversity, interest in the project goals, and potential for wide-scale application of new practices. State agency personnel, task forces, and local school districts receive on-site consultations, demonstrations, and workshops. Access to information and support services of other dissemination networks is also provided.

The Frank Porter Graham Center was chosen as subcontractor for the state of North Carolina by the project's prime contractor, NETWORK, Inc., a private educational research and development organization located in Andover, Massachusetts. FPG collaborates with NETWORK and the N.C. Division for Exceptional Children to help eight school districts with a pilot "school-based support team model." Each school in the eight districts has organized a team to help its staff with inservice training and problems that arise in educating children with special needs.

In 1981, FPG planned for the pilot projects with the Division for Exceptional Children and held a planning meeting with the directors of special education in the eight districts. In 1982, FPG will: 1) convene a workshop for school personnel in the eight districts, 2) help the districts refine their team models based on their initial experiences, and 3) help develop a state plan to disseminate the team model to other school districts. The project will end in May 1982.

NIE PROJECT KNOW-HOW

Ronald Wiegerink, Investigator

This study, funded by the National Institute of Education, focuses on the use of knowledge resources by public school personnel to develop early education programs for young children handicapped by ethnicity, poverty,

and/or disability. The overall goal of this work is to give federal and state agencies a better understanding of how they can deliver knowledge about educating young handicapped children to local school systems.

Progress made during the project's first year consisted of the selection of factors affecting knowledge use, the selection of 24 study sites in six states, and the development of protocol instruments to gather information from the study sites.

Project staff conducted a pilot study in Durham County, developing two quantitative methods and one qualitative method to analyze the data. Twelve major site visits plus an additional series of phone interviews with administrators and teachers were conducted at the 12 remaining sites, and write-ups on each of the 24 sites were completed. In September 1981 an advisory panel met to review the project's progress. The panel critiqued the individual site visit write-ups and discussed projected activities.

Second year activities will focus on the collection and analysis of longitudinal changes in knowledge use and knowledge use capacity. Project staff will prepare a report of these findings.

DAYCARE TECHNICAL ASSISTANCE AND TRAINING SYSTEM (DC/TATS)

Richard M. Clifford, Director

DC/TATS has provided assistance and training to day treatment and daycare personnel under contracts with the North Carolina Department of Human Resources. The project began in July 1976 and was concluded in September 1981. During 1981, two major activities were completed.

-- An orientation manual, Your Day Care Staff: Helping Them Grow and Develop. The manual has three major sections: "Policies and Procedures," "Understanding and Working with Children," and "Career Development." The materials were field-tested in three counties in central North Carolina. A final draft version was used to provide training to over 100 directors and staff of daycare centers across the state. The Daycare Section in the North Carolina Department of Human Resources is providing training and copies of the manual to an additional 400-500 daycare directors from centers providing care subsidized by the Department.

-- Testing methods for involving daycare staff members in the Child Development Associate accreditation program. At the present time, the program is used primarily by Head Start program staff. This effort was to expand involvement of the daycare community. A network of support teams in three pilot counties was organized. There was minimal follow-up with individual staff members. At the end of eight months some 50 daycare staff in the three counties were working on their credentials. A report on the effectiveness of methods developed in the program was prepared for

the Department of Human Resources, with recommendations for increasing the number of credentialled personnel in North Carolina daycare programs.

The Resource Library

DC/TATS continued to operate its library for staff of the Department of Human Resources, daycare coordinators in county departments of social services, and other persons involved in daycare training in North Carolina. During the year substantial additions were made to the library and a new catalog was produced.

References

Clifford, R. M., & McCabe, B. Day care as a small business. Chapel Hill: UNC, Frank Porter Graham Child Development Center, 1981.

McAdams, J. W., Mansfield, S., Clifford, R. M., Rutala, M., Matlock, B., & Mulvihill, B. Your day care staff: Helping them grow and develop. Chapel Hill: UNC, Frank Porter Graham Child Development Center, 1981.

TECHNICAL ASSISTANCE TO PARENT EDUCATION PROGRAMS

John W. Pelosi, Director

North Carolina is committed to developing preschool programs for handicapped children in all school systems of the state. Many of the programs will need help in fostering parent involvement.

Research has demonstrated that preschool programs for handicapped children can effectively fulfill parents' needs, and that three major benefits will accrue: 1) the handicapped child will have a better chance to maximize his or her potential, 2) the family structure will be more likely to remain intact, and 3) the programs in which the child is involved will become more productive in fostering growth.

This project, extending from June 1980 to September 1981, provided technical aid to Durham County Public Schools to establish services to meet parents' needs. The goals were to help parents understand the child's handicap, use the services, acquire skills to promote the child's development, and generate an emotional support system to diminish the frustration of having a handicapped child.

The project used a technical assistance model to define and promote parent involvement. The model design involved five steps: 1) specifying school program components and boundaries; 2) determining needs for full program development; 3) formulating goals, objectives, and plans; 4) carrying out action plans; 5) evaluating the plans.

Approximately 300 hours of training and direct service were provided by the project staff to the Durham program and its parents. The Durham staff used the FPG resource library to increase their knowledge about curriculum material and its use. The FPG staff also provided assistance in adding content and new components to existing curricula.

Evaluation of the Parent Education Program showed clear gains in parent knowledge about child development. There was also improvement in parent self-image. Parents seemed to be less authoritative toward their children, tended to engage in more active learning situations, and were more willing at the end of the program than at the beginning to facilitate self-directed activities for their children.

Results of the project will be disseminated to other North Carolina schools through a step-by-step handbook describing procedures found to be effective.

Reference

Pelosi, J. W., Flynn, C., & Wiegerink, R. Preschool programs for special children and their parents: A guide for public schools. Chapel Hill, N.C.: UNC, Frank Porter Graham Child Development Center, 1981.

THE TRIAD SYSTEM FOR TECHNICAL ASSISTANCE AND RESOURCES (TRISTAR)

David Lillie, Director

Operating under a contract with the Special Education Program in the U.S. Department of Education, TRISTAR provided training and assistance to local school systems, state education agencies, and regional resource centers, from September 1979 through September 1981.

The program implemented the "Education for All Handicapped Children Act" (PL 94-142) and was cooperatively administered by the North Carolina Department of Public Instruction, the University of North Carolina at Chapel Hill, and the Wake County (N.C.) school system. The cooperation of these three agencies enabled participation at three levels in finding solutions to problems of educating children with special needs.

A three-day conference held in two regions of the country conveyed information in areas such as child-find techniques and the identification and utilization of local sources of funding. Needs assessments conducted at the conclusion of the conference culminated in the delivery of services and practices to education agencies and regional resource centers.

A second conference on reducing adversarial relationships between parents and schools was held from June 28 to July 1, 1981, in McAllen, Texas. This conference brought new information and resources to 47 participants from 18 states and Washington, D.C.

Follow-up technical assistance included a proceedings report of the conference and two training manuals developed by TRISTAR. One manual was aimed at improving teacher-parent relationships. The second manual assisted in the development of workshops for parents and teachers.

MID-SOUTH REGIONAL RESOURCE CENTER

Pascal Trohanis, Subcontract Manager

The rights of handicapped children and their parents are guaranteed by due process provisions of the "Education for All Handicapped Children" Act (P.L. 94-142). Children in publicly funded institutions such as schools are protected through application of the Act's due process procedures. Parents are required to be fully informed about such matters as test results and placement decisions. The law has also created a system for resolving through court actions any differences which may arise between parents and caretakers.

The Mid-South Regional Resource Center, funded by a contract from the Special Education Program of the U.S. Department of Education, worked to improve due process procedures and their application. From October 1, 1980, to August 1, 1981, the Frank Porter Graham Center, under subcontract with the University of Kentucky in Lexington, participated in the development of the following products on procedural safeguards for the Mid-South RRC:

-- a published conceptual framework of procedural due process;

-- a published catalogue of annotated entries of due process materials (print and audiovisual formats);

-- a methodology for identifying and documenting promising practices in due process that may be replicated by other school systems;

-- a field-draft version of a handbook on Procedural Due Process for School Administrators.

Information about these products may be obtained from the Mid-South RRC/ 128 Porter Bldg./ 730 S. Limestone/ Lexington, KY 40506. Telephone: (606) 258-4921

RESEARCH TRAINING PROGRAM

Donald McKinney, Director

The Research Training Program was awarded a second five-year grant in 1979 and is now in its eighth year of operation at the FPG Center. The program, for students interested in research careers in child development and mental retardation, is funded by the National Institute of Child Health and Human Development (NICHHD).

To date, the RTP has drawn 19 predoctoral and 12 postdoctoral fellows from the following UNC departments: special education, developmental psychology, city and regional planning, pediatrics, educational psychology, and maternal and child health.

Predoctoral students who specialize in a UNC doctoral program also participate in practicum, seminars, supervised research at FPG, and summer internships. Such settings as Harvard's Children's Hospital Medical Center, Massachusetts State Department of Education, U.S. Bureau of Education for the Handicapped, and the Neuro-psychiatric Institute at UCLA have provided experience for students during the summer internships.

The postdoctoral program offers an intensive two-year research experience in child development issues relevant to mental retardation. Postdoctoral students have included specialists in learning disabilities, child development, education, psychology/nursing, and pediatrics.

In addition, the program provides opportunities to publish research results and makes funds available for travel to professional conferences. Students have presented their research papers at conferences of the Council for Exceptional Children, Society for Research on Child Development, Association for Children with Learning Disabilities, and the Gatlinburg Conference on Mental Retardation.

Former RTP fellows are now employed in research positions at the University of California at Riverside, North Carolina Central University, Northwest Regional Education Laboratory, Penn State University, University of Maryland, and other institutions.

Public Policy Analysis

THE BUSH INSTITUTE FOR CHILD AND FAMILY POLICY

James J. Gallagher, Director; Ron Haskins, Associate Director

In the last two decades, there has been a growing realization among social scientists that research and publication in journals do not necessarily qualify as expertise in public policy. One response to this realization has been a call for explicit training in the analysis of public policies and the application of social science knowledge to social problems.

It was in this context that FPG was given the opportunity in June 1978 by the Bush Foundation of St. Paul, Minnesota, to create a training program in policy analysis. In addition to the program at FPG, the Bush Foundation also funded training programs at Yale University, the University of Michigan, and the University of California at Los Angeles. All of these programs train doctoral students and post-doctoral fellows in the use of social science techniques and information to improve public policies that affect children and families.

Bush Faculty and Fellows

Although the UNC Bush program is based at the FPG Center, the Institute faculty consists of both FPG staff and faculty members from 12 departments and schools in the University (see page 58). Similarly, the students and fellows represent a broad variety of academic disciplines.

The Bush Institute offers two training programs in policy analysis--one for doctoral students and one for professional fellows. Doctoral students are enrolled in a regular academic department and fulfill all requirements for the PhD degree set by that department. Before the third year of doctoral work they are admitted to the Bush Institute for two years. During these two years, they complete course work on methods of policy analysis, conduct a policy analysis on some topic concerning children and families, and finish their dissertation (which is usually related in some way to their policy analysis topic).

Professional fellows have five or more years' experience in settings that deal with children or families, such as a research or training institution, advocacy group, government bureaucracy, or community service agency. They spend one year at the Bush Institute learning techniques of policy analysis and applying these techniques to a policy problem that grew out of their previous experience.

The Bush Model of Policy Analysis

In conducting a policy analysis, each student or fellow works under the guidance of two members of the Bush faculty. Although several analysis approaches have been articulated, the work of students and fellows generally follows six primary steps: statement of the problem situation; statement of analysis criteria; specification of alternative policy strategies to solve the problem; review of research and other information pertinent to evaluating the alternative strategies; specification of a plan for implementing the selected strategy; and statement of a plan for communication with policymakers.

Bush Activities

In addition to student and fellow analyses, the Institute engaged in five major activities during the 1980-81 academic year. First, weekly seminars were conducted with students, fellows, and faculty to present and discuss models of policy analysis and apply these models to policy problems such as children's health, family violence, daycare, and handicapped children. A substantial portion of time in the seminar was set aside for students and fellows to discuss their own policy problems and receive comments.

Second, the Institute sponsored a two-day workshop for 20 journalists to brief them on recent developments in three areas of public policy. The Bush faculty and fellows were joined by elected officials and service providers in discussing the general areas of foster care, teenage pregnancy, and child health.

Third, six Bush faculty members participated in publishing an edited book describing and discussing various methods of social policy analysis. This volume, entitled Models for Analysis of Social Policy: An Introduction, is the first volume in a series of books on social policy that will be published over the next three years by the Ablex Publishing Company of Norwood, New Jersey.

A fourth activity of the Institute was sponsorship of a colloquium series in which six prominent experts in maternal and child health participated. Each speaker addressed a particular aspect of the report of the Select Panel for the Promotion of Child Health. These six papers, plus four additional papers on health policy by Bush faculty members and fellows, will be published as Volume 2 (Child Health Policy in an Age of Fiscal Austerity) in the Ablex series on social policy analysis.

Fellowships for Minority Students

The Bush program at UNC, as well as the Bush programs at UCLA, Michigan, and Yale, received a grant from the Federal Administration for Children, Youth, and Families to admit minority candidates into our training programs. As a result of this grant, FPG increased the number of

minority fellows being trained in policy analysis. Hopefully, in the long run this expansion will help increase the number of minority group members who are able to influence public policy for children and families.

References

Haskins, R., & Gallagher, J. J. Care and education of young children in America: Policy, politics, and social science. Norwood, N. J.: Ablex, 1980.

Haskins, R., & Gallagher, J. J. Models for social policy analysis: An introduction. Norwood, N.J.: Ablex, 1981.

Support Services and Administration

COMMUNICATIONS

Joseph Sanders, Director

The programs conducted at FPG present a full range of demands for communication and dissemination. The programs now include research, demonstration and development, outreach and training, and public policy analysis. Because it is a complex organization, FPG must communicate with many groups, each having a distinct interest in the Center's work: researchers, the University community and local residents, federal and state agencies, advocacy groups, the general public, and the Center's own staff.

The Center's communications office assists project staffs in communicating with these groups. In 1980 and 1981, the communications office published eight issues of the national newsletter Developments, published a bi-weekly newsletter for FPG employees, assisted with two contract proposals, and released several articles through the UNC News Bureau. The office also coordinated two workshops for reporters and editors throughout the Eastern U.S. The workshops, on child and family policy, were sponsored by FPG's Bush Institute.

The Center's 15th birthday was observed with a three-day series of activities held October 8-10, 1981. On October 10 the Center held a rededication ceremony at which 270 guests were addressed by N.C. Governor James Hunt, N.C. Congressmen L. H. Fountain and Ike Andrews, UNC President William Friday, UNC-CH Chancellor Christopher Fordham, FPG Director James J. Gallagher, and Dr. Nancy Robinson (widow of FPG's first director, Dr. Halbert Robinson). The communications office issued a report, "1966/ Our 15th Year/ 1981," to summarize the Center's accomplishments.

The Center's technical assistance, policy, and curriculum development staffs also produce media products to meet their specific needs; these products are listed in the projects' sections of this Report. In 1980 and 1981, the media products of the communications office and other components of FPG were recognized by the Society for Technical Communication and the International Association of Business Communicators with 14 awards in regional competition and one international award.

COMPUTER SERVICES

Kaye Fendt, Director

The computer services office was established in 1977 to promote data sharing among researchers and across various research projects, thereby enhancing FPG's multidisciplinary studies. The primary function of the office is to maintain secure and accurate storage for FPG research data as well as to document this data for analysis.

The office is equipped with a low-speed printer, two hard-copy terminals, three cathode ray tubes (CRT's), and a fourth CRT at the NCNB Plaza offices. In addition, the office provides consultation and training to investigators and research assistants on forms design, data handling, and computer usage.

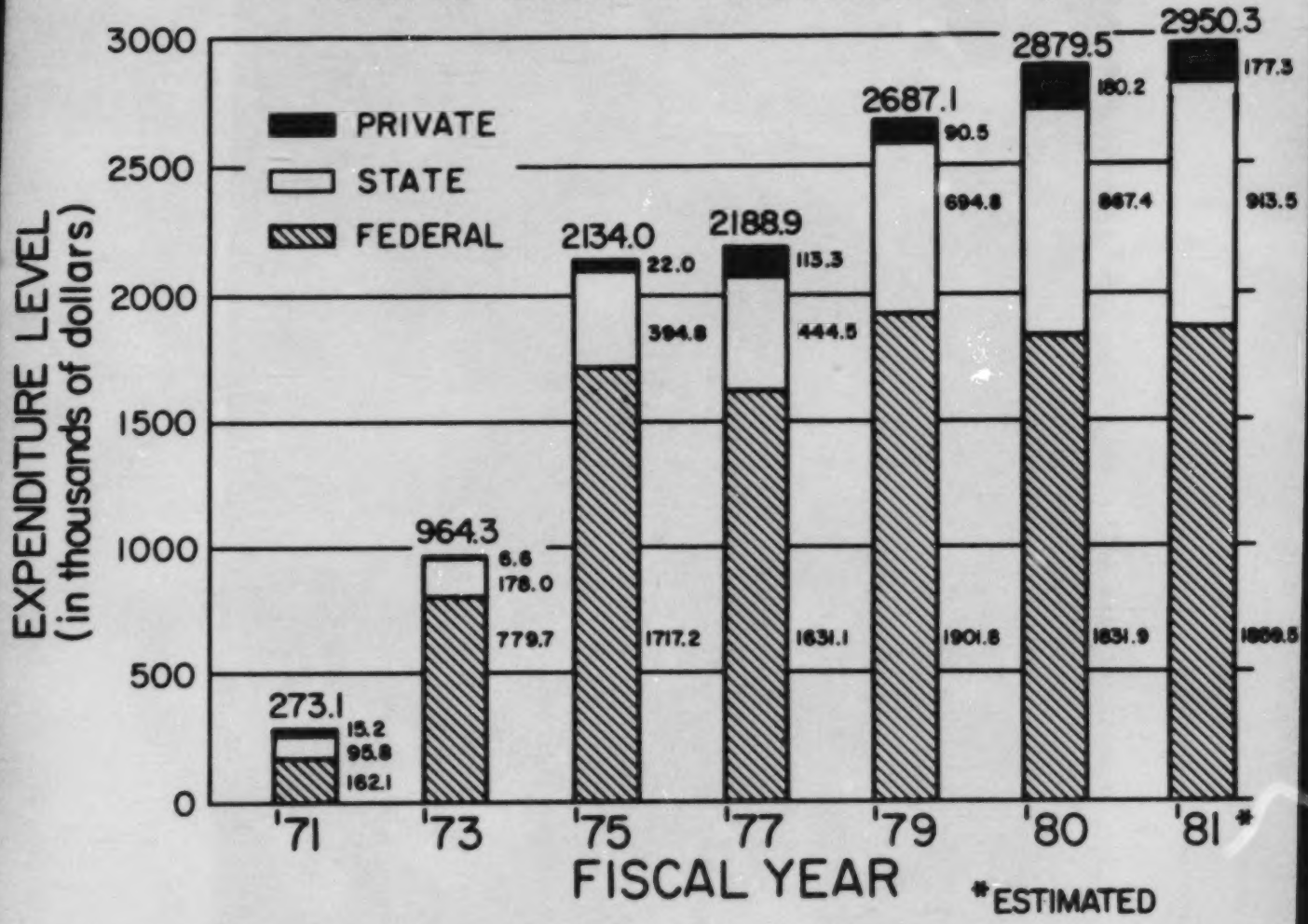
Most recently, studies have been conducted on the needs of the FPG business office. Preliminary recommendations regarding systems analysis and design have been made and plans to establish a micro-computer system for the business office in 1982 are being processed.

The Technical Assistance Development System (TADS) data management system has been fully developed and implemented. A data processing coordinator was hired in 1980 to meet the needs of this project. Data for three years have been set up in Statistical Analysis System (SAS) data bases and analyses are conducted as needed.

In addition to these new and expanded developments, the CIREEH research project data base has been expanded and is being maintained on a systematic basis. Analyses are provided as needed. The Abecedarian research and medical data files are also being maintained, including the design and implementation of the Abecedarian's School-Age data management system.

TREND IN SOURCES OF SUPPORT FOR YEARS 1971-1981

FRANK PORTER GRAHAM CHILD DEVELOPMENT CENTER



NOTE: FY 1981 runs from July 1, 1981 to June 30, 1982

FISCAL YEAR 1981 (July 1, 1981, through June 30, 1982)
ESTIMATED EXPENDITURES BY PROJECT (direct costs only)

Project	Source	Amount
Federal		
Core Funds (Gallagher)	NICHD	201,751
Longitudinal Program (Ramey/Gallagher)	NICHD	406,671
CIREEH (Gallagher)	SEP	347,211
Three Levels of Service (Sparling/Ramey)	ACYF	71,957
TRISTAR (Lillie)	SEP	32,945
Research Training (McKinney)	NICHD	122,733
TADS (Trohanis)	SEP	494,497
Regional Resource Center (Trohanis)	*University of Kentucky	4,000
Basic Skills (Trohanis)	*CEMREL	115,326
Knowledge Use (Wiegerink)	NIE	53,624
Network	*NETWORK, Inc.	8,775
Federal Subtotal		$1,859,490

Key

ACYF: Administration for Children, Youth and Families
NICHD: National Institute of Child and Human Development
NIE: National Institute of Education
SEP: Special Education Program, U.S. Department of Education

*Funds originate from Federal agencies; subcontracted through FPG.

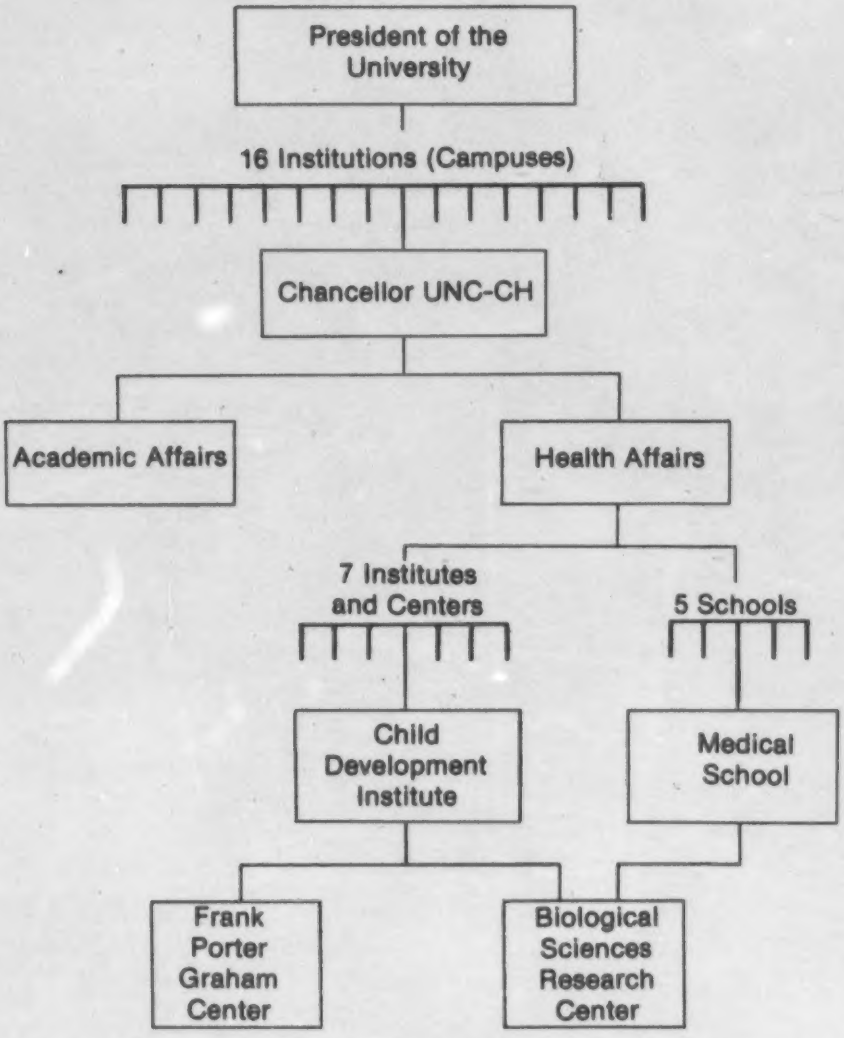
FISCAL YEAR 1981 (July 1, 1981, through June 30, 1982)
ESTIMATED EXPENDITURES BY PROJECT (continued)

Project	Source	Amount
State of North Carolina		
Technical Assistance-Parent Education (Pelosi)	UNC-GA	4,088
Daycare Technical Assistance (Clifford)	Department of Human Resources	11,443
Homebased Training (Harms)	Department of Human Resources	129,185
FPG Center (Gallagher)	UNC-CH	730,704
Receipts-Supported Accounts		
Media Fund (Clifford/Harms)	Receipts	3,000
Copy Center (Gallagher)	Receipts	18,000
Parent Fees (Gallagher/Sparling)	Receipts	17,000
DD/TAS Publications (Wiegerink)	Receipts	150
State Subtotal		913,570

FISCAL YEAR 1981 (July 1, 1981, through June 30, 1982)
ESTIMATED EXPENDITURES BY PROJECT (continued)

Project	Source	Amount
Private		
Bush Institute (Gallagher)	Bush Foundation	136,235
Bush Network (Gallagher)	Bush Foundation	7,207
Bush Fellowships (Gallagher)	Bush Foundation (through Yale)	18,518
Gifted and Talented (Gallagher)	Spencer Foundation	6,500
FPG Center (Gallagher)	Trust Funds	8,861
Private Subtotal		177,321
TOTAL		$2,950,381

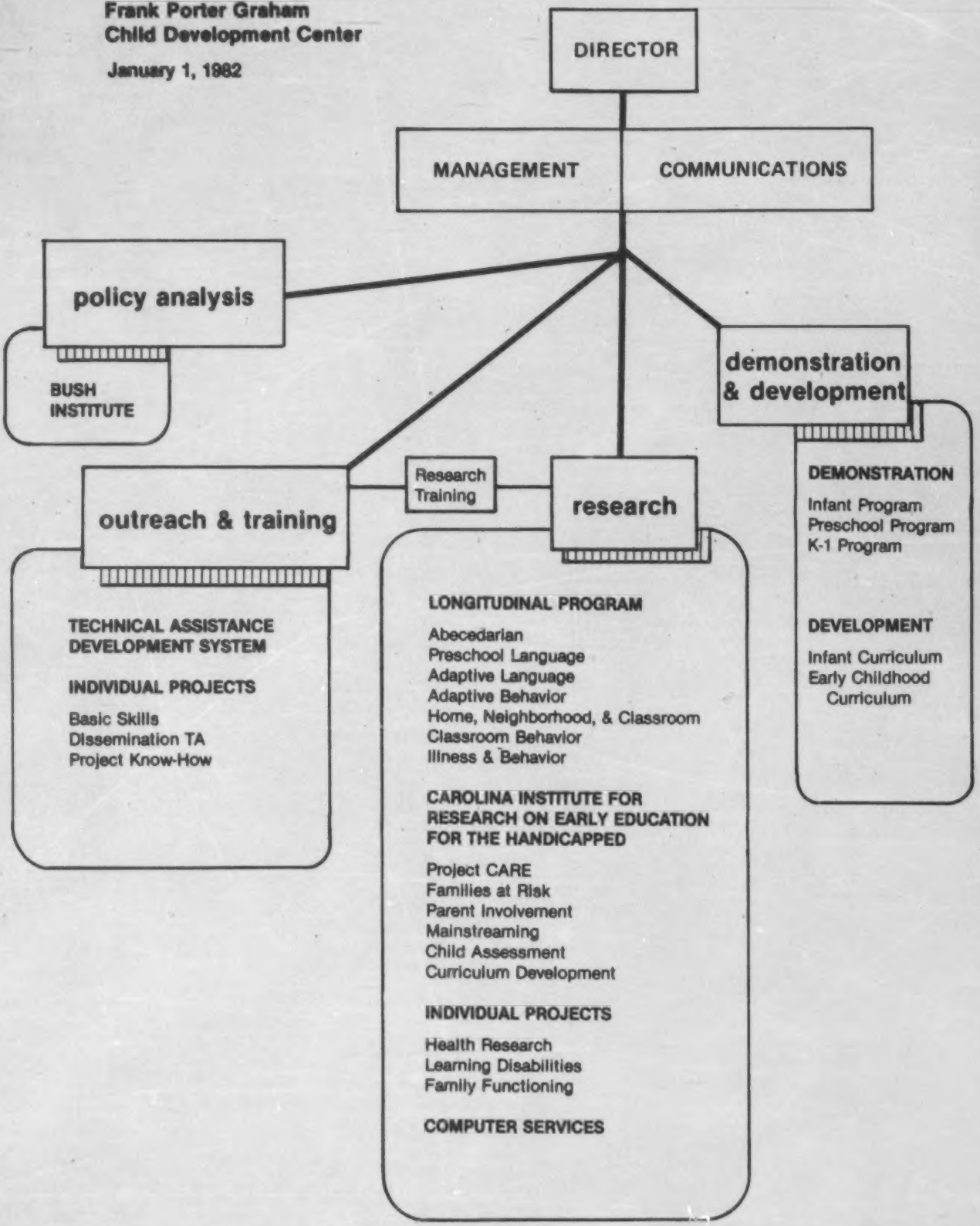
relationship of FPG to the university of north carolina



Component Organization

Frank Porter Graham
Child Development Center

January 1, 1982



STAFF WITH JOINT APPOINTMENTS ON JANUARY 1, 1982

NAME	DEGREE	AWARDED BY	RANK	SCHOOL OR DEPARTMENT	PERMANENT TENURE
J. Adams	PhD	Columbia	Assistant Professor	Nursing	
M. Appelbaum	PhD	Illinois	Professor	Psychology	Yes
M. Bristol	PhD	UNC-CH	Assistant Professor	Psychiatry	
A. Collier	MD	Miami	Professor	Pediatrics	Yes
D. Farran	PhD	Bryn Mawr	Clin. Assoc. Professor	Special Education	
J. Gallagher	PhD	Penn State	Kenan Professor Research Professor	Special Education Psychology	Yes
T. Harms	PhD	UC-Berkeley	Clin. Assoc. Professor	Curriculum & Instruction	
F. Henderson	MD	UNC-CH	Assistant Professor	Pediatrics	
K. Jens	PhD	Wisconsin	Clin. Assoc. Professor Clinical Scientist	Special Education DDDL/BSRC*	
N. Johnson	PhD	UNC-CH	Clin. Assist. Professor Clinical Scientist	Psychiatry DDDL/BSRC*	
D. Lillie	EdD	Indiana	Professor	Special Education	Yes

*Division for Disorders of Development and Learning, Biological Sciences Research Center

STAFF WITH JOINT APPOINTMENTS ON JANUARY 1, 1982 (continued)

NAME	DEGREE	AWARDED BY	RANK	SCHOOL OR DEPARTMENT	PERMANENT TENURE
D. McKinney	PhD	NC State	Associate Professor	School Psychology	Yes
J. Pelosi	PhD	Syracuse	Clin. Assoc. Professor	Special Education	
C. Ramey	PhD	W. Virginia	Research Professor	Psychology	
E. Schaefer	PhD	Catholic U.	Professor	Maternal & Child Health	Yes
M. Sanyal	MD	Tufts	Clin. Asst. Professor	Pediatrics	
M. Sharp	MD	Harvard	Assistant Professor	Pediatrics	
R. Simeonsson	PhD	George Peabody	Professor	Special Education	Yes
J. Sparling	PhD	Michigan	Lecturer	Curriculum & Instruction	
P. Trohanis	PhD	Maryland	Clin. Assoc. Professor	Education	
B. Wasik	PhD	Fla. State	Professor Associate Dean	School Psychology Education	Yes
J. Watkins	FNP	UNC-CH	Family Nurse Practitioner	Pediatrics	
R. Wiegerink	PhD	Michigan	Professor	Educational Administration	Yes

DIRECTORS AND SENIOR STAFF OF FPG PROJECTS

(As of January 1, 1982)

Directors

Dr. James J. Gallagher, Director of FPG; Co-principal Investigator, Longitudinal Program; Principal Investigator, CIREEH; and Director of the Bush Institute for Child and Family Policy

Dr. Albert Collier, Assistant Director for Health Programs; Senior Investigator, Longitudinal Program

Dr. Thelma Harms, Assistant Director for Development; Director, Early Childhood Curriculum Development Program; Principal Investigator, Nutrition Education Program

Dr. Ron Haskins, Associate Director of FPG; Associate Director, Bush Institute

Dr. David Lillie, Assistant Director of Outreach

Dr. Craig Ramey, Associate Director of FPG and Director of Research; Principal Investigator, Longitudinal Program; Assistant Director, CIREEH;* Faculty, Research Training Program

Senior Staff

Dr. Judith Adams, Investigator, Longitudinal Program

Dr. Mark Appelbaum, Senior Investigator, Longitudinal Program

Mr. Talbot Black, Associate Director, TADS**

Dr. Marie Bristol, Associate Director and Investigator, CIREEH* and Child Development Services Project

Ms. Carrie Bynum, Coordinator, Parent Education Program

Dr. Frances Campbell, Investigator, Longitudinal Program

Dr. Richard Clifford, Director, DC/TATS***

Dr. Dale Farran, Investigator, Longitudinal Program

Dr. Lynn Feagans, Investigator, Longitudinal Program and Learning Disabilities Project

Ms. Kaye Fendt, Computer Services

Dr. Neal Finkelstein, Investigator, Longitudinal Program

Dr. Alice Gordon, Investigator, Longitudinal Program

Ms. Jean Gowen, Coordinator, CIREEH*

Dr. Fred Henderson, Investigator, Health Research Program

Dr. Kenneth Jens, Investigator, CIREEH*

Dr. Nancy Johnson, Investigator, CIREEH*

Dr. Donald McKinney, Principal Investigator, Learning Disabilities Project; Senior Investigator, Longitudinal Program; Director, Research Training Program

Ms. Sally Nussbaumer, Director, Early Childhood Education Program

Dr. John Pelosi, Associate Director, Child Development Services Project

Mr. Joseph Sanders, Communications Specialist

Dr. Margaret Sanyal, Investigator, Health Research Program

Dr. Earl Schaefer, Senior Investigator, CIREEH* and Longitudinal Program

Dr. Michael Sharp, Investigator, Health Research Program

Dr. Rune Simeonsson, Associate Director, Research Training Program; Assistant Director, CIREEH*

Dr. Joseph Sparling, Director of Demonstration; Senior Investigator, CIREEH* and Longitudinal Program

Ms. Tanya Suarez, Associate Director, TADS**

Dr. Pascal Trohanis, Director, TADS**

Dr. Ann Turnbull, Investigator, CIREEH*

Dr. Barbara Wasik, Senior Investigator, CIREEH*

Ms. Jessie Watkins, Family Nurse Practitioner, Health Research Program

Dr. Ron Wiegerink, Investigator, CIREEH;* Director, Child Development Services Project

Ms. Rachel Windham, Administrative Manager of FPG

Bush Institute Faculty

Dr. James J. Gallagher (Institute director), Special Education and FPG Center

Dr. Ron Haskins, FPG Center

Dr. John Akin, Economics

Dr. Andrew Dobelstein, Social Work

Dr. Dale C. Farran, Special Education

Dr. Deborah A. Freund, Public Health

Dr. Thelma Harms, Curriculum and Instruction (Education)

Dr. Dorothy Howze, Maternal and Child Health

Dr. Jonathan B. Kotch, Public Health

Dr. Joan S. Lipsitz, Center for Early Adolescence

Dr. Frank Loda, Pediatrics

Dr. Duncan MacRae, Jr., Political Science and Sociology

Dr. C. Arden Miller, Public Health

Dr. Craig T. Ramey, Psychology

Dr. Eli A. Rubinstein, Psychology

Mr. Joseph Sanders, FPG Center

Dr. Donald J. Stedman, Administration

Mr. Samuel M. Streit, Private Law Practice.

Dr. John Turner, Social Work

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*Carolina Institute for Research on Early Education of the Handicapped
**Technical Assistance Development System
***Day Care Technical Assistance and Training System

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